Access	DR#	

SEARCH REQUEST FORM

Scientific and Technical Information Center

59915

£* **	,					10/645 3 2
Requester's Full Name:	Phone Number 30	ey Ex	aminer #:	Date:	2/8/02	
Art Unit: \63\	Phone Number 30	8-4519	Serial Number	r: 09/635.	21610/8	130-13 5
Mail Box and Bldg/Room	Location	10 / results	Format Preferre	d (circle): PAPEI	Disk e-i	MAIL
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If more than one search	is submitted, plea	ise prioritize s :******	earcnes in ord: *******	er ot neea. *******	******	*****
Please provide a detailed stater Include the elected species or s utility of the invention. Define known. Please attach a copy of	tructures, keywords, syr any terms that may hav the cover sheet, pertine	nonyms, acronyms re a special meanin at claims, and abst	, and registry numbg. Give examples ract.	pers, and combine woor relevant citations	rith the concept , authors, etc,	t or if
Title of Invention: And Inventors (please provide full	agenists of the	Magnegiu	in binding	defect as I	rerabenh	i Ogenti.
Inventors (please provide ful	Inames). Ther	+ Clifton	WELLS		·	
inventors (piease provide rai	r names).				T	
	(2) (2) (400	4-				
Earliest Priority Filing Da	•					_
For Sequence Searches Only. appropriate serial number.	Please include all pertinen	it information (pare	nt, child, divisional,	or issued patent numi	ers) along with	the
R	5 N CHZ >	CONCA	Bio	Jan Delaval Reference Libra stechnology & Chemi CM1 1E07 - 703-30 jan.delaval@uspt	cal Library 8-4498	
				1		
X is trans	> C = CH - H	c=c()	-, aus > C =	c< >c*	H-(Hz),	, -)4e <
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Species 1	Jain (72					
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=> fil reg FILE 'REGISTRY' ENTERED AT 11:34:46 ON 12 FEB 2002 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS. COPYRIGHT (C) 2002 American Chemical Society (ACS)

Jan Delaval Reference Librarian Biotechnology & Chemical Library CM1 1E07 - 703-308-4498 jan.delaval@uspto.gov

10 FEB 2002 STRUCTURE FILE UPDATES: HIGHEST RN 391197-12-9 DICTIONARY FILE UPDATES: 10'FEB 2002 HIGHEST RN 391197-12-9

TSCA INFORMATION NOW CURRENT THROUGH July 7, 2001

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Calculated physical property data is now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details: http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

The-P indicator for Preparations was not generated for all of the CAS Registry Numbers that were added to the H/Z/CA/CAplus files between 12/27/01 and 1/23/02. Use of the P indicator in online and SDI searches during this period, either directly appended to a CAS Registry Number or by qualifying an L-number with /P, may have yielded incomplete results. As of 1/23/02, the situation has been resolved. Also, note that searches conducted using the PREP role indicator were not affected.

Customers running searches and/or SDIs in the H/Z/CA/CAplus files incorporating CAS Registry Numbers with the P indicator between 12/27/01 and 1/23/02, are encouraged to re-run these strategies. Contact the CAS Help Desk at 1-800-848-6533 in North America or 1-614-447-3698, worldwide, or send an e-mail to help@cas.org for further assistance or to receive a credit for any duplicate searches.

=> d sta que 140 L11 STR

VAR G1=7-2 10-4/11-2 12-4/13-2 14-4/15-2 17-4/18-2 21-4 VAR G2=NH2/22/25 NODE ATTRIBUTES:

CONNECT IS E1 RC AT CONNECT IS E1 RC AT CONNECT IS E1 RC AT DEFAULT MLEVEL IS ATOM DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED NUMBER OF NODES IS 26

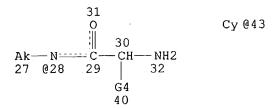
STEREO ATTRIBUTES: NONE

T.24 SCR 2016 OR 2026 OR 1997 OR 1841

L27 SCR 2039 OR 2050 OR 2049 OR 2048 OR 2053 OR 2052 OR 2051 O

42

R 2043 OR 2054 4354 SEA FILE=REGISTRY SSS FUL L11 NOT (L24 OR L27) L29 L33 STR 37 6 0 0 NH-Ak Ak-N-Ak23 24 @25 26 022 36 NH-- Ĉ NH2 - CH2-- CH -Ak 2 3 . 4 034 35 38 G4



VAR G2=NH2/22/25 VAR G3=NH2/22/34/28 VAR G4=AK/43 NODE ATTRIBUTES: CONNECT IS M1 RC AT 43 DEFAULT MLEVEL IS ATOM DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED NUMBER OF NODES IS 25

STEREO ATTRIBUTES: NONE

84 SEA FILE=REGISTRY SUB=L29 CSS FUL L33 L35 12 SEA FILE=REGISTRY ABB=ON PLU=ON L35 AND (C6H14N2O OR L36 C5H10N2O) PLU=ON L36 AND PENTANAMIDE AND 1 SEA FILE=REGISTRY ABB=ON L37 AMINOMETHYL PLU=ON L36 AND PENTANAMIDE AND 5 L381 SEA FILE=REGISTRY ABB=ON AMINO 4 METHYL 1 SEA FILE=REGISTRY ABB=ON PLU=ON L36 AND BUTENAMIDE L39 3 SEA FILE=REGISTRY ABB=ON PLU=ON (L37 OR L38 OR L39) L40

=> d ide can tot 140

L40 ANSWER 1 OF 3 REGISTRY COPYRIGHT 2002 ACS

RN 214783-27-4 REGISTRY

CN Pentanamide, 3-(aminomethyl)- (9CI) (CA INDEX NAME)

FS 3D CONCORD

MF C6 H14 N2 O

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

$$\begin{array}{c|c} \text{O} & \text{CH}_2\text{--}\text{NH}_2 \\ \parallel & \parallel \\ \text{H}_2\text{N--}\text{C--}\text{CH}_2\text{--}\text{CH--}\text{Et} \end{array}$$

- **PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**
 - 2 REFERENCES IN FILE CA (1967 TO DATE)
 - 2 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 131:102645

REFERENCE 2: 129:316688

L40 ANSWER 2 OF 3 REGISTRY COPYRIGHT 2002 ACS

RN 214783-26-3 REGISTRY

CN Pentanamide, 5-amino-4-methyl- (9CI) (CA INDEX NAME)

FS 3D CONCORD

MF C6 H14 N2 O

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1967 TO DATE) 2 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 131:102645

REFERENCE 2: 129:316688

L40 ANSWER 3 OF 3 REGISTRY COPYRIGHT 2002 ACS

RN 102831-39-0 REGISTRY

CN 2-Butenamide, 4-amino-3-methyl-, monohydrochloride (9CI) (CA

INDEX NAME)

MF C5 H10 N2 O . C1 H

SR CA

LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT (*File contains numerically searchable property data)

$$\begin{array}{c|c} \text{O} & \text{Me} \\ || & | \\ \text{H}_2\text{N}-\text{C}-\text{CH} \Longrightarrow \text{C}-\text{CH}_2-\text{NH}_2 \end{array}$$

HCl

1 REFERENCES IN FILE CA (1967 TO DATE)

1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 105:60922

=> d his 140-

(FILE 'REGISTRY' ENTERED AT 09:52:55 ON 12 FEB 2002)

L40 3 S L37-L39

FILE 'HCAOLD' ENTERED AT 11:34:11 ON 12 FEB 2002

L41 0 S L40

FILE 'HCAPLUS' ENTERED AT 11:34:14 ON 12 FEB 2002

L42 3 S L40

FILE 'USPATFULL, USPAT2' ENTERED AT 11:34:28 ON 12 FEB 2002

L43

1 S L40

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FILE 'REGISTRY' ENTERED AT 11:34:46 ON 12 FEB 2002
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=> fil uspatall FILE 'USPATFULL' ENTERED AT 11:35:22 ON 12 FEB 2002 CA INDEXING COPYRIGHT (C) 2002 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'USPAT2' ENTERED AT 11:35:22 ON 12 FEB 2002 CA INDEXING COPYRIGHT (C) 2002 AMERICAN CHEMICAL SOCIETY (ACS)

```
=> d 143 bib abs hitstr
L43 ANSWER 1 OF 1 USPATFULL
       1999:81945 USPATFULL
TT
       Epsilon caprolactam compositions
       Maher, John Michael, Charleston, WV, United States
TN
       Bryant, David Robert, South Charleston, WV, United States
       Holladay, Johnathan Eugene, Charleston, WV, United States
       Eisenschmid, Thomas Carl, Cross Lanes, WV, United States
       Briggs, John Robert, Charleston, WV, United States
       Olson, Kurt Damar, Cross Lanes, WV, United States
       Union Carbide Chemicals & Plastics Technology Corporation, Danbury, CT,
PΑ
       United States (U.S. corporation)
       US 5925754
                               19990720
PΤ
ΑT
       US 1997-956745
                               19971023 (8)
       Continuation-in-part of Ser. No. US 1997-839576, filed on 15 Apr 1997
RLI
       And Ser. No. US 1997-843340, filed on 15 Apr 1997
DT
FS
       Granted
       Primary Examiner: Raymond, Richard L.; Assistant Examiner: Kifle, Bruck
EXNAM
LREP
       Coon, Gerald L.
CLMN
       Number of Claims: 9
       Exemplary Claim: 1
ECL
DRWN
       No Drawings
LN.CNT 1451
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       This invention relates to a composition comprising (a) epsilon
AB
       caprolactam and (b) one or more of 5-[4,5-di(3-carboxypropyl)-2-
       pyridyl]pentanoic acid or salt or amide, 4-[4,5-di(2-carboxypropyl)-2-
       pyridyl]-2-methylbutanoic acid or salt or amide, 2-[2-(2-carboxybutyl)-5-
       (1-carboxypropyl)-4-pyridyl]butanoic acid or salt or amide,
       5-[3,5-di(3-carboxypropyl)-2-pyridyl]pentanoic acid or salt or amide,
       4-[3,5-di(2-carboxypropyl)-2-pyridyl]-2-methylbutanoic acid or salt or
       amide, 2-[-2-(2-carboxybutyl)-5-(1-carboxypropyl)-3-pyridyl]butanoic
       acid or salt or amide, 5-amino-4-methylpentanamide, 4-amino-3-
       ethylbutanamide, 5-[4,5-di(4-hydroxybutyl)-2-pyridyl]pentanol,
       4-[4,5-di(2-methoxypropyl)-2-pyridyl]-2-methylbutanol,
```

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 214783-26-3P 214783-27-4P

(prodn. of caprolactam compns. contg. different byproducts)

compositions are useful in the preparation of nylon 6.

2-[2-(2-methoxybutyl)-5-(1-methoxypropyl)-4-pyridyl]butanol,

pyridyl]butanol, 5-amino-4-methyl-1-pentanol, 5-imino-2-methyl-1-

5-[3,5-di(4-hydroxybutyl)-2-pyridyl] pentanol, 4-[3,5-di(2-methoxypropyl)-2-pyridyl]-2-methylbutanol, <math>2-[2-(2-methoxybutyl)-5-(1-methoxypropyl)-3-

pentanamine, 5-amino-2-methyl-1-pentanol, 5-imino-4-methyl-1-pentanamine and 2-butyl-4,5-dipropylpyridine, wherein the weight ratio of component (a) to component (b) is at least about 99 to 1. The epsilon caprolactam

RN 214783-26-3 USPATFULL

CN Pentanamide, 5-amino-4-methyl- (9CI) (CA INDEX NAME)

$$\begin{array}{ccc} & & \text{Me} \\ \parallel & \parallel & \parallel \\ \text{H}_2\text{N}-\text{C}-\text{CH}_2-\text{CH}_2-\text{CH}-\text{CH}_2-\text{NH}_2 \end{array}$$

RN 214783-27-4 USPATFULL

CN Pentanamide, 3-(aminomethyl)- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} \text{O} & \text{CH}_2\text{--}\text{NH}_2 \\ \parallel & \parallel \\ \text{H}_2\text{N--}\text{C--}\text{CH}_2\text{--}\text{CH--}\text{Et} \end{array}$$

=> fil hcaplus FILE 'HCAPLUS' ENTERED AT 11:35:35 ON 12 FEB 2002 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS. COPYRIGHT (C) 2002 AMERICAN CHEMICAL SOCIETY (ACS)

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FILE COVERS 1907 - 8 Feb 2002 VOL 136 ISS 7 FILE LAST UPDATED: 30 Jan 2002 (20020130/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

CAS roles have been modified effective December 16, 2001. Please check your SDI profiles to see if they need to be revised. For information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

The P indicator for Preparations was not generated for all of the CAS Registry Numbers that were added to the CAS files between 12/27/01 and 1/23/02. As of 1/23/02, the situation has been resolved. Searches and/or SDIs in the H/Z/CA/CAplus files incorporating CAS Registry Numbers with the P indicator executed between 12/27/01 and 1/23/02 may be incomplete. See the NEWS message on this topic for more information.

=> d 142 bib abs hitstr retable tot

L42 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2002 ACS

AN 1999:450917 HCAPLUS

DN 131:102645

TI Production of caprolactam compositions containing different byproducts for easier separation

IN Maher, John Michael; Bryant, David Robert; Holladay, Johnathan Eugene; Eisenschmid, Thomas Carl; Briggs, John Robert; Olson, Kurt Damar

PA Union Carbide Chemicals & Plastics Technology Corporation, USA

SO U.S., 15 pp. CODEN: USXXAM

DT Patent

LA English

```
FAN.CNT 6
                                            APPLICATION NO.
                                                             DATE
     PATENT NO.
                      KIND
                            DATE
                            19990720
                                            US 1997-956745
                                                             19971023
PI
     US 5925754
                       Α
     US 5817883
                            19981006
                                            US 1997-843340
                                                             19970415
                       Α
    US 5962680
                       Α
                            19991005
                                            US 1997-839576
                                                             19970415
    WO 9846564
                                            WO 1998-US7486
                                                             19980414
                       Α1
                            19981022
         W: BR, CA, CN, JP, KP, KR, MX, PL, RU, SG
         RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,
             PT, SE
     EP 975590
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                            20000202
                                            EP 1998-915567
                                                             19980414
         R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, NL, SE, PT
     JP 2001521569
                                            JP 1998-544206
                       T2
                                                             19980414
                            20011106
                            20011120
                                            BR 1998-8872
                                                             19980414
     BR 9808872
                       Α
PRAI US 1997-839576
                            19970415
                       A2
     US 1997-843340
                       A2
                            19970415
     US 1997-956745
                       Α
                            19971023
     WO 1998-US7486
                       W
                            19980414
     Title compns. comprise (a) .epsilon.-caprolactam and (b) one or more of
AB
     5-[4,5-di(3-carboxypropyl)-2-pyridyl]pentanoic acid or salt or amide,
     4-[4,5-di(2-carboxypropyl)-2-pyridyl]-2-methylbutanoic acid or salt or
     amide, 2-[2-(2-carboxybutyl)-5-(1-carboxypropyl)-4-pyridyl]butanoic acid
     or salt or amide, 5-[3,5-di(3-carboxypropyl)-2-pyridyl]pentanoic acid or
     salt or amide, 4-[3,5-di(2-carboxypropyl)-2-pyridyl]-2-methylbutanoic acid
     or salt or amide, 2-[2-(2-carboxybuty1)-5-(1-carboxypropy1)-3-
     pyridyl]butanoic acid or salt or amide, 5-amino-4-methylpentanamide,
     4-amino-3-ethylbutanamide, 5-[4,5-di(4-hydroxybutyl)-2-pyridyl]pentanol,
     4-[4,5-di(2-methoxypropyl)-2-pyridyl]-2-methylbutanol,
     2-[2-(2-methoxybutyl)-5-(1-methoxypropyl)-4-pyridyl]butanol,
     5-[3,5-di(4-hydroxybutyl)-2-pyridyl]pentanol, 4-[3,5-di(2-methoxypropyl)-2-
     pyridyl]-2-methylbutanol, 2-[2-(2-methoxybutyl)-5-(1-methoxypropyl)-3-
     pyridyl]butanol, 5-amino-4-methyl-1-pentanol, 5-imino-2-methyl-1-
     pentanamine, 5-amino-2-methyl-1-pentanol, 5-imino-4-methyl-1-pentanamine
     and 2-butyl-4,5-dipropylpyridine, in a:b wt. ratio at least about 99 to 1.
     The byproducts result from reductive amination and cyclization of C6
     difunctional intermediates produced by carbonylation of butadiene.
     .epsilon.-caprolactam compns. are useful in the prepn. of nylon 6.
ΙT
     214783-26-3P 214783-27-4P
     RL: BYP (Byproduct); PREP (Preparation)
        (prodn. of caprolactam compns. contg. different byproducts)
RN
     214783-26-3 HCAPLUS
     Pentanamide, 5-amino-4-methyl- (9CI) (CA INDEX NAME)
CN
```

RN 214783-27-4 HCAPLUS CN Pentanamide, 3-(aminomethyl)- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} \text{O} & \text{CH}_2\text{--}\text{NH}_2 \\ \parallel & \parallel \\ \text{H}_2\text{N--}\text{C--}\text{CH}_2\text{--}\text{CH--}\text{Et} \end{array}$$

RETABLE Referenced Author (RAU)	Year VOL PG (RPY) (RVL) (RPG)	(RWK)	File
Anon	1971	GB 1254222	HCAPLUS
Anon	1974	GB 1357735	HCAPLUS
Anon	1984	RU 1087510	Į.
Anon	1986	EP 0183545	HCAPLUS

•			
Anon	1987	EP 0271145	HCAPLUS
	11988	EP 0273489	HCAPLUS
	11989	EP 0343819	HCAPLUS
	11990	EP 0351616	HCAPLUS
Anon	11990	(EP 0405433	HCAPLUS
	11991	EP 0403433	•
Anon	•	·	HCAPLUS
Anon	1991	EP 0448848	HCAPLUS
Anon	1991	RU 150453	
Anon	1992	EP 0511126	HCAPLUS
Anon	1993	EP 0556681	HCAPLUS
Anon	1993	EP 0562450	HCAPLUS
Anon	1993	EP 0577205	HCAPLUS
Anon	1993 、	JP 06306012	HCAPLUS
Anon	1994	IEP 0602442	HCAPLUS
Anon	11994	IEP 0643031	HCAPLUS
Anon	1994	IWO 9426688	HCAPLUS
Anon	11995	EP 0648731	HCAPLUS
Anon	11995	IEP 0662468	HCAPLUS
	11995	EP 0712828	HCAPLUS
Anon		IWO 9506025	
Anon	1995	•	HCAPLUS
Anon	1995	WO 9506027	HCAPLUS
Anon	1995	WO 9518089	HCAPLUS
Anon	1995	WO 9518783	HCAPLUS
Anon	1995	WO 9530680	HCAPLUS
Anon	1996	EP 0728732	HCAPLUS
Anon	1996	EP 0729943	HCAPLUS
Anon	1996	EP 0729944	HCAPLUS
Anon	1996	EP 0738701	HCAPLUS
Anon	1997	EP 0761634	HCAPLUS
Atadan	11994	US 5292944	HCAPLUS
Bahrmann	1996	IUS 5583250	HCAPLUS
Bahrmann, I	11980 8 329	•	
Bertleff	11990	US 4910328	HCAPLUS
	11991	US 5003102	HCAPLUS
Bertleff			•
Bertozzi, S	1995 487 41	Journal of Organomet	
Billig	1988	US 4769498	HCAPLUS
Botteghi, C	1980 184 C17		
Bunel	1994	US 5288903	HCAPLUS
Burke	1986	US 4622423	HCAPLUS
Burke	1992	US 5145995	HCAPLUS
Burke	1993	US 5250726	HCAPLUS
Carlock	1980	US 4185083	HCAPLUS
Carlock	1980	US 4189448	HCAPLUS
Carlock	11980	US 4214109	HCAPLUS
Denis	11993	US 5198577	HCAPLUS
Denis	1994	US 5312979	HCAPLUS
Dennis	1984	US 4482749	HCAPLUS
Dennis	11986	IUS 4567306	HCAPLUS
	1989	US 4824817	HCAPLUS
Drent			HCAPLUS
Drent	1991	US 5028734	•
D'Amore	1991	JUS 5026901	HCAPLUS
Fell	1995	US 5434312	HCAPLUS
Fell, B	1975 99 1	Chemical-Zeitung	1
Fell, B	1977 2 211	Journal of Molecular	HCAPLUS
Fujita	1972	US 3652549	HCAPLUS
Henin	[1987	US 4658068	HCAPLUS
Hignett	11980	US 4200591	HCAPLUS
Hignett	1980·	US 4200592	HCAPLUS
Hoelderich	11990	US 4933487	HCAPLUS
Hoshiyama	11984	US 4447661	HCAPLUS
Hutmacher	11988		HCAPLUS
•		and the second s	HCAPLUS
Hutmacher	1988	US 4731445	
Jenck	1991	US 5041642	HCAPLUS
Johnson	1972	US 3660493	HCAPLUS
Johnson	11983	US 4409418	HCAPLUS
Kim	1980	IUS 4198352	HCAPLUS

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Knifton
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Sielcken
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                                                                  | HCAPLUS
Vagt
                                     1345
                                            |Journal of Molecular|HCAPLUS
Van Leeuwen, P
                        |1985 |31
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van Vliet
                        |1987 |
                                                                  | HCAPLUS
Vargas
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                                            JUS 5306848
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Yates
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Young
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                                                                  HCAPLUS
     ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2002 ACS
1.42
ΑN
     1998:706201 HCAPLUS
DN
     129:316688
TΙ
     Epsilon caprolactam compositions and byproducts
IN
     Maher, John Michael; Bryant, David Robert; Holladay, Johnathan Eugene;
     Eisenschmid, Thomas Carl; Briggs, John Robert; Olson, Kurt Damar
PA
     Union Carbide Chemicals & Plastics Technology Corp., USA
SO
     PCT Int. Appl., 51 pp.
     CODEN: PIXXD2
DT
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FAN.CNT 6
                       KIND
                                             APPLICATION NO.
     PATENT NO.
                             DATE
                                                               DATE
                       ____
ΡI
     WO 9846564
                        A1
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                                             WO 1998-US7486
                                                               19980414
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         RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,
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                                             US 1997-843340
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                                                               19970415
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     US 5925754
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                             19990720
                                                               19971023
                        A
                                             EP 1998-915567
     EP 975590
                             20000202
                        A1
                                                               19980414
         R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, NL, SE, PT
                                             JP 1998-544206
     JP 2001521569
                      Т2
                             20011106
                                                               19980414
     BR 9808872
                                             BR 1998-8872
                                                               19980414
                        Α
                             20011120
PRAI US 1997-839576
                             19970415
                        Α
     US 1997-843340
                             19970415
                        Α
     US 1997-956745
                             19971023
                        Α
     WO 1998-US7486
                        W
                             19980414
AB
     This invention relates to a compn. comprising (a) epsilon caprolactam and
     (b) one or more of 5-[4,5-di(3-carboxypropyl)-2-pyridyl]pentanoic acid or
     salt or amide, 4-[4,5-di(2-carboxypropyl)-2-pyridyl]-2-methylbutanoic acid
     or salt or amide, 2-[2-(2-carboxybutyl)-5-(1-carboxypropyl)-4-
     pyridyl]butanoic acid or salt or amide, 5-[3,5-di(3-carboxypropyl)-2-
     pyridyl]pentanoic acid or salt or amide, 4-[3,5-di(2-carboxypropyl)-2-
```

pyridyl]-2-methylbutanoic acid or salt or amide, 2-[2-(2-carboxybutyl)-5-

(1-carboxypropyl)-3-pyridyl]butanoic acid or salt or amide, 5-amino-4-methylpentanamide, 4-amino-3-ethylbutanamide, 5-[4,5-di(4-hydroxybutyl)-2-pyridyl]pentanol, 4-[4,5-di(2-methoxypropyl)-2pyridyl]-2-methylbutanol, 2-[2-(2-methoxybutyl)-5-(1-methoxypropyl)-4pyridyl]butanol, 5-[3,5-di(4-hydroxybutyl)-2-pyridyl]pentanol, 4-[3,5-di(2-methoxypropyl)-2-pyridyl]-2-methylbutanol, 2[2-(2-methoxybutyl)-5-(1-methoxypropyl)-3-pyridyl]butanol, 5-amino-4-methyl-1-pentanol, 5-imino-2-methyl-1-pentanamine, 5-amino-2-methyl-1-pentanol, 5-imino-4-methyl-1-pentanamine and 2-butyl-4,5-dipropylpyridine, wherein the wt. ratio of component a) to component b) is at least about 99 to 1. The epsilon caprolactam compns. are useful in the prepn. of nylon 6. 214783-26-3P 214783-27-4P

IT

RL: BYP (Byproduct); PREP (Preparation) (epsilon caprolactam compns. and byproducts)

RN214783-26-3 HCAPLUS

CN Pentanamide, 5-amino-4-methyl- (9CI) (CA INDEX NAME)

RN 214783-27-4 HCAPLUS

CN Pentanamide, 3-(aminomethyl)- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} \text{O} & \text{CH}_2\text{--}\text{NH}_2 \\ \parallel & \parallel \\ \text{H}_2\text{N--}\text{C--}\text{CH}_2\text{--}\text{CH--}\text{Et} \end{array}$$

L42 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2002 ACS

1986:460922 HCAPLUS ΑN

DN 105:60922

TΤ .beta.-Methyleneglutamic acid and .beta.-methyleneglutamine

ΑU Paik, Yi Hyon; Dowd, Paul

CS Dep. Chem., Univ. Pittsburgh, Pittsburgh, PA, 15260, USA

SO J. Org. Chem. (1986), 51(15), 2910-13

CODEN: JOCEAH; ISSN: 0022-3263

DT Journal

LA English

OS CASREACT 105:60922

GI

$$H_2N$$
 CO_2H EtO_2C CO_2Et H_2N H_2C Me COR I R^2 II COR III

AB Title compds. DL-I (R = OH and NH2, resp.) were prepd. from aminomalonates and allenes. Thus, AcNHCH(CO2Et)2 was treated with HgC:C:CHCO2Et in the presence of EtONa to give adduct II (R1 = Ac, R2 = CO2Et), which was hydrolyzed by 20% HCl at 50.degree. to give DL-I.cntdot.HCl (R = OH) and unsatd. acid III.cntdot.HCl (R = OH). Also, BocNHCH(CO2Et)2 (Boc = Me3CO2C) was treated with H2C:C:CHCN in the presence of EtONa to give II (R1 = Boc, R2 = CN), which was hydrolyzed by 20% HCl at 50.degree. to give DL-I.cntdot.HCl (R = NH2) and unsatd. amide III (R = NH2).

ΙT

L29

4354 S L11 NOT (L24 OR L27) FUL

102831-39-0P

```
RL: SPN (Synthetic preparation); PREP (Preparation)
        (prepn. of)
RN
     102831-39-0 HCAPLUS
     2-Butenamide, 4-amino-3-methyl-, monohydrochloride (9CI) (CA INDEX NAME)
           Ме
H2N-C-CH C-CH2-NH2
        HC1
=> d his
     (FILE 'HOME' ENTERED AT 09:48:46 ON 12 FEB 2002)
                SET COST OFF
     FILE 'HCAPLUS' ENTERED AT 09:49:03 ON 12 FEB 2002
               E WELLS I/AU
L1
             52 S E3, E4, E14
               E MAGNESIUM/CS, PA
L2
              0 S (MAGNES?(L)DIAG?)/PA,CS
L3
              9 S L1 AND (MAGNESIUM OR MG###)
     FILE 'REGISTRY' ENTERED AT 09:51:04 ON 12 FEB 2002
             1 S 7439-95-4
L4
     FILE 'HCAPLUS' ENTERED AT 09:51:31 ON 12 FEB 2002
L5
              2 S L4 AND L1
              9 S L3, L5
L6
     FILE 'REGISTRY' ENTERED AT 09:51:56 ON 12 FEB 2002
              1 S 22537-22-0
L7
               E MAGNESIUM, ION/CN
r_8
              1 S E4
     FILE 'HCAPLUS' ENTERED AT 09:52:30 ON 12 FEB 2002
L9
             1 S L7, L8 AND L1
L10
              9 S L6, L9
     FILE 'REGISTRY' ENTERED AT 09:52:55 ON 12 FEB 2002
L11
              STR
L12
             30 S L11
L13
               STR L11
L14
              4 S L13
L15
               SCR 2043 OR 2127
              5 S L13 NOT L15
L16
L17
               SCR 2039 OR 2127 OR 2050 OR 2049 OR 2048 OR 2053 OR 2052 OR 205
L18
              3 S L13 NOT L17
L19
               STR L13,
L20
              3 S L19 NOT L17
L21
               STR L19
L22
             0 S L21 NOT L17 CSS SAM
L23
            17 S L11 NOT L17 SAM
L24
         L25
             12 S L11 NOT (L17 OR L24)
L26
             0 S L21 NOT (L17 OR L24) CSS SAM
L27
               SCR 2039 OR 2050 OR 2049 OR 2048 OR 2053 OR 2052 OR 2051 OR 204
L28
            14 S L11 NOT (L24 OR L27)
```

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SAV KUMAR635/A L29
L30
             0 S L21 CSS SAM SUB=L29
L31
             23 S L21 SAM SUB=L29
L32
             0 S L21 CSS FUL SUB=L29
L33
                STR L19
L34
             4 S L33 CSS SAM SUB=L29
             84 S L33 CSS FUL SUB=L29
L35
                SAV L35 KUMAR635A/A
L36
             12 S L35 AND (C6H14N2O OR C5H10N2O)
              1 S L36 AND PENTANAMIDE AND AMINOMETHYL
L37
              1 S L36 AND PENTANAMIDE AND 5 AMINO 4 METHYL
L38
L39
              1 S L36 AND BUTENAMIDE
              3 S L37-L39
L40
```

FILE 'HCAOLD' ENTERED AT 11:34:11 ON 12 FEB 2002 L41 0 S L40

FILE 'HCAPLUS' ENTERED AT 11:34:14 ON 12 FEB 2002 L42 3 S L40

FILE 'USPATFULL, USPAT2' ENTERED AT 11:34:28 ON 12 FEB 2002 L43 1 S L40

=> fil reg FILE 'REGISTRY' ENTERED AT 12:30:03 ON 12 FEB 2002 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS. COPYRIGHT (C) 2002 American Chemical Society (ACS)

STRUCTURE FILE UPDATES: 10 FEB 2002 HIGHEST RN 391197-12-9 DICTIONARY FILE UPDATES: 10 FEB 2002 HIGHEST RN 391197-12-9

TSCA INFORMATION NOW CURRENT THROUGH July 7, 2001

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Calculated physical property data is now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details: http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

The P indicator for Preparations was not generated for all of the CAS Registry Numbers that were added to the H/Z/CA/CAplus files between 12/27/01 and 1/23/02. Use of the P indicator in online and SDI searches during this period, either directly appended to a CAS Registry Number or by qualifying an L-number with /P, may have yielded incomplete results. As of 1/23/02, the situation has been resolved. Also, note that searches conducted using the PREP role indicator were not affected.

Customers running searches and/or SDIs in the H/Z/CA/CAplus files incorporating CAS Registry Numbers with the P indicator between 12/27/01 and 1/23/02, are encouraged to re-run these strategies. Contact the CAS Help Desk at 1-800-848-6533 in North America or 1-614-447-3698, worldwide, or send an e-mail to help@cas.org for further assistance or to receive a credit for any duplicate searches.

=> d sta que 18

STR

L1

CH— CH2— CH @15 16 @17

CH—CH2—CH2—CH @18 19 20 @21 NH—Ak 022 23 Ak—N—Ak 24 @25 26

VAR G1=7-2 10-4/11-2 12-4/13-2 14-4/15-2 17-4/18-2 21-4

VAR G2=NH2/22/25

NODE ATTRIBUTES:

CONNECT IS E1 RC AT 23

CONNECT IS E1 RC AT 24

CONNECT IS E1 RC AT 2

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 26

STEREO ATTRIBUTES: NONE

L2 SCR 2016 OR 2026 OR 1997 OR 1841

L3 SCR 2039 OR 2050 OR 2049 OR 2048 OR 2053 OR 2052 OR 2051 O

R 2043 OR 2054

L4 4354 SEA FILE=REGISTRY SSS FUL L1 NOT (L2 OR L3)

L5 STR

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 10

STEREO ATTRIBUTES: NONE

L7 17 SEA FILE=REGISTRY SUB=L4 SSS FUL L5

L8 3 SEA FILE=REGISTRY ABB=ON PLU=ON L7 AND NA/ELS:

=> d his 18-

(FILE 'REGISTRY' ENTERED AT 12:24:47 ON 12 FEB 2002)

SAV L7 KUMAR635B/A

L8 3 S L7 AND NA/ELS

FILE 'HCAOLD' ENTERED AT 12:29:22 ON 12 FEB 2002

L9 0 S L8

FILE 'HCAPLUS' ENTERED AT 12:29:26 ON 12 FEB 2002 L10 2 S L8

FILE 'USPATFULL, USPAT2' ENTERED AT 12:29:43 ON 12 FEB 2002 L11 0 S L8

FILE 'REGISTRY' ENTERED AT 12:30:03 ON 12 FEB 2002

=> d ide can tot'18

L8 ANSWER 1 OF 3 REGISTRY COPYRIGHT 2002 ACS

RN 61544-14-7 REGISTRY

CN Benzeneacetic acid, .alpha.-[[4-(dimethylamino)-2-methyl-4-oxo-2-butenyl]amino]-, monosodium salt (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Benzeneacetic acid, .alpha.-[[4-(dimethylamino)-2-methyl-4-oxo-2-butenyl]amino]-, monosodium salt, (.+-.)-

MF C15 H20 N2 O3 . Na

LC STN Files: CA, CAPLUS

$$\begin{array}{c|c} O & Me \\ \hline Me_2N & N \\ \hline \end{array}$$

Na

1 REFERENCES IN FILE CA (1967 TO DATE)

1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 86:55412

L8 ANSWER 2 OF 3 REGISTRY COPYRIGHT 2002 ACS

RN 50971-89-6 REGISTRY

CN Benzeneacetic acid, .alpha.-[[4-(dimethylamino)-4-oxo-2-butenyl]amino]-4-hydroxy-, monosodium salt (9CI) (CA INDEX NAME)

MF C14 H18 N2 O4 . Na

LC STN Files: CA, CAPLUS

Na

- 1 REFERENCES IN FILE CA (1967 TO DATE)
- 1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFÉRENCE 1: 80:14945

L8 ANSWER 3 OF 3 REGISTRY COPYRIGHT 2002 ACS

RN 50971-87-4 REGISTRY

CN Benzeneacetic acid, .alpha.=[[4-(dimethylamino)-4-oxo-2-butenyl]amino]-,
 monosodium salt (9CI) (CA INDEX NAME)

MF C14 H18 N2 O3 . Na

LC STN Files: CA, CAPLUS

Na

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 80:14945

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FILE COVERS 1907 - 8 Feb 2002 VOL 136 ISS 7 FILE LAST UPDATED: 30 Jan 2002 (20020130/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

CAS roles have been modified effective December 16, 2001. Please check your SDI profiles to see if they need to be revised. For information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

The P indicator for Preparations was not generated for all of the CAS Registry Numbers that were added to the CAS files between 12/27/01 and 1/23/02. As of 1/23/02, the situation has been resolved. Searches and/or SDIs in the H/Z/CA/CAplus files incorporating CAS Registry Numbers with the P indicator executed between 12/27/01 and 1/23/02 may be incomplete. See the NEWS message on this topic for more information.

=> d bib abs hitstr retable tot 110

L10 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2002 ACS

AN 1977:55412 HCAPLUS

DN 86:55412

TI DL-6-Aminoacylamidopenicillanic acids

PA Osaka University, Japan

SO Ger. Offen., 24 pp. Division of Ger. Offen. 2,020,133.

CODEN: GWXXBX

DT Patent

LAGerman

FAN.CNT 2

22111	111 2				
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ΡI	DE 2065879	A1	19760826	DE 1970-2065879	19700424
	NL 7005611	A	19701103	NL 1970-5611	19700417
	DK 132026	В	19751013	DK 1970-2079	19700423
	ES 379011	A1	19720801	ES 1970-379011	19700424
	FR 2040451	A5	19710122	FR 1970-15647	19700429
	NL 7402745	A	19740527	NL 1974-2745	19740228
	NL 164020	В	19800616		
	NL 164020	С	19801117		
PRAI	JP 1969-33867		19690430		
GI					

6-(Aminoacylamido)penicillanic acid [I; R = PhCH(NH2), AB .alpha.-amino-2-thenyl, (MeS)CH2CH2CH(NH2), 1-aminocyclohexyl] are prepd. by reaction of 6-aminopenicillanic acid (II) with amino acid derivs., protected on the N with a .beta.-keto acid deriv. Thus, aminobenzylpenicillin [I; R = PhCH(NH2)] is obtained in 60% yield by condensation of II with the mixed anhydride from pivalic acid and [[1-methyl-2-(morpholinocarbonyl)vinyl]amino]phenylacetic acid.

IT 61544-14-7

RL: RCT (Reactant)

(acylation by, of 6-aminopenicillanic acid)

RN61544-14-7 HCAPLUS

CN Benzeneacetic acid, .alpha.-[[4-(dimethylamino)-2-methyl-4-oxo-2butenyl]amino]-, monosodium salt (9CI) (CA INDEX NAME)

Na

ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2002 ACS L10

1974:14945 HCAPLUS ΑN

80:14945 DN

TICephalosporins

IN İshimaru, Toshiyasu; Kodama, Yutaka

PΑ Toyoma Chemical Co., Ltd.

Fr. Demande, 12 pp. SO

CODEN: FRXXBL

DT Patent LA French

FAN	.CNT 1			•	
	PATENT NO.	KIND.	DATE	APPLICATION NO.	DATE
PI	FR 2166316	A1	19730817	FR 1972-514	19720107
	FR 2166316	В1	19771028		
~~	- 1' / \		July 1 ON Table		•

GI For diagram(s), see printed CA Issue.

AB Cephalosporins I (R = 2-thienylacetyl, PhCH(NH2)CO, p-HOC6H4CH(NH2)CO; R1 = OAc, OMe, H) were prepd. by acylating I (R = H) in the presence of methoxysilyl chloride R2(MeO)2SiCl (R2 = Me, MeO), or R3(MeO)SiCl2 (R3 = Me, Ph, MeO). Thus I (R = H, R1 = OAc) was treated with Me-(MeO)2SiCl, followed by 2-thienylacetyl chloride and HCl to give 86% I (R = 2-thienylacetyl, R1 = OAc) as its Na salt.

IT 50971-87-4 50971-89-6 RL: RCT (Reactant)

(acylation of cephalosporins by)

RN 50971-87-4 HCAPLUS

CN Benzeneacetic acid, .alpha.-[[4-(dimethylamino)-4-oxo-2-butenyl]amino]-, monosodium salt (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} O & Ph \\ \parallel & \parallel \\ \text{Me}_2\text{N-C-CH----} \text{CH-CH}_2\text{--NH-CH-CO}_2\text{H} \end{array}$$

Na

RN 50971-89-6 HCAPLUS

CN Benzeneacetic acid, .alpha.-[[4-(dimethylamino)-4-oxo-2-butenyl]amino]-4-hydroxy-, monosodium salt (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{NH-CH}_2\text{-CH-CH-NMe}_2 \\ \text{CH-CO}_2\text{H} \end{array}$$

🕽 Na